

## PRODUCTION MEASUREMENT AND SITE SECURITY

PINC NO.	PINC	Authority	Enforcement Action
<b>MEASUREMENT OF LIQUID HYDROCARBONS</b>			
<b>Does each sales meter facility include the following components which are compatible with the systems to which they are connected:</b>			
M-100	A positive-displacement meter with a nonreset totalizer?	180(c)(2)(i)	W/C
M-101	A calibrated prover tank, a master meter, or a mechanical displacement prover?	180(c)(2)(ii)	W/C
M-102	A proportional-to-flow sampling device which is pulsed by the meter output?	180(c)(2)(iii)	C
M-103	A temperature measurement or temperature compensation device?	180(c)(2)(iv)	C
<b>Is each sales meter facility maintained to ensure that:</b>			
M-104	Meters are operated within the gravity range specified by the manufacturer?	180(c)(4)(i)	W/C
M-105	Meters are operated within the manufacturer's specifications for maximum and minimum flow rates?	180(c)(4)(ii)	W/C
M-106	Meters are reproven when changes in metering conditions affect the meter's performance?	180(c)(4)(iii)	W/C
M-107	Is the sampling device installed such that the sampling point is in the flowstream immediately upstream or downstream of the meter or divert valve?	180(c)(5)(i)	C
M-108	Is the sample container for the sampling device vapor-tight?	180(c)(5)(ii)	C
M-109	Does the sample container for the sampling device include a mixing device to permit complete mixing of the sample prior to removal from the container?	180(c)(5)(ii)	C
M-110	Is the sampling device installed such that the sample probe is in the center of the flow piping	180(c)(5)(iii)	C

	in a vertical run?		
M-111	Is the sampling device installed such that the sample probe is located at least three pipe diameters downstream of any pipe fitting within a region of turbulent flow?	180(c)(5)(iii)	C
M-112	Is the MMS representative(s) permitted to witness provings?	180(d)(1)	W
M-113	Is the integrity of the calibration of each mechanical displacement prover, prover tank, master meter, or other type of prover traceable to test measures which have been certified by the National Bureau of Standards?	180(d)(2)	W
M-114	Is the master meter calibrated to obtain a master meter factor before using the master meter to establish an operating meter factor?	180(d)(3)(i)	C
M-115	Is the master meter calibrated with a fluid of similar gravity, viscosity, flow rate, and temperature as flows through the operating meter?	180(d)(3)(i)	C
M-116	Is this calibration conducted monthly but the time between calibration shall not exceed 6 weeks?	180(d)(3)(i)	W
M-117	Does the lessee calibrate a master meter by conducting and recording runs?	180(d)(3)(ii)	C
M-118	Is the average of the runs which produced the acceptable results used to compute the master meter factor?	180(d)(3)(ii)	W
M-119	Is the master meter installed upstream of any back-pressure or reverse flow check valves associated with the operating meter?	180(d)(3)(iii)	C
M-120	Is each operating sales meter proved to determine the meter factor each month, however, the time between meter factor determinations is not to exceed 42 days?	180(d)(4)	W/C
M-121	When establishing an operating meter factor with a prover tank, are proof runs made and recorded?	180(d)(4)(i)	W/C
M-122	Is the average of the results of these two runs used to compute the meter factor?	180(d)(4)(i)	C
M-123	When establishing an operating meter factor with a master meter, are proof runs made?	180(d)(4)(ii)	C

M-124	Is the volume of each of these runs at least 10 percent of the hourly rated capacity of the operating meter?	180(d)(4)(ii)	W
M-125	Is the average of the results of these three runs used to compute the meter factor?	180(d)(4)(ii)	W
M-126	When establishing an operating meter factor with a mechanical-displacement prover, are proof runs made and recorded?	180(d)(4)(iii)	C
M-127	Is the average of the results of the six out of five runs used to compute the meter factor?	180(d)(4)(iii)	C
M-128	Does each allocation meter facility include a meter, provisions for use of a device capable of proving the allocation meter, and equipment for continuous or daily sampling?	180(e)(1)	W/C
M-129	Are samples taken continuously or daily?	180(e)(1)	W/C
M-130	Are allocation meters measuring 50 barrels of oil per day or more proven monthly?	180(e)(2)(i)	W
M-131	Are allocation meters measuring less than 50 barrels of oil per day proven quarterly?	180(e)(2)(ii)	W
M-132	Is a copy of each allocation meter proving report kept at the field location for a period of 2 years?	180(e)(3)	W
M-133	If an allocation meter proving results in a meter factor which differs from the previous meter factor by an amount greater than 0.02 and less than 0.07, is the allocation meter adjusted and reproven prior to return to service?	180(e)(4)	W
M-134	If an allocation meter proving results in a meter factor which differs from the previous meter factor by an amount equal to or greater than 0.07, is the allocation meter repaired and reproven prior to return to service?	180(e)(5)	W
	<b>Is each sales tank facility designated by the Regional Supervisor as a sales location on which royalty shall be based equipped with a:</b>	180(f)(1)	
M-135	Vapor-tight thief hatch?		C
M-136	Vent-line valve?		C
M-137	Fill line?		C
	<b>Does each sales meter facility:</b>	180(c)(3)	

M-138	Prevent reversal of flow through the meter?		C
M-139	Protect meters from pressure pulsations or surges?		C
M-140	Prevent the meter from being subjected to shock pressures which are greater than its maximum rated working pressure?		C

### **MEASUREMENT OF GAS**

M-200	Is the gas measuring equipment installed and operated in accordance with the recommendations contained in the API MPMS, Chapter 14?	181(c)(1)	W/C
M-201	Is the MMS representative(s) permitted to witness gas meter calibrations?	181(c)(3)(i)	W
M-202	Is each gas meter calibrated at intervals not to exceed 45 days?	181(c)(3)(iii)	W/C
M-203	For positive displacement or turbine meters, is the calibration conducted at the average hourly rate of flow since the last calibration?	181(c)(3)(iii)	W
M-204	For orifice meter installations, is the differential range and static range consistent with the hourly flow rate?	181(c)(3)(iii)	C
M-205	Does the lessee retain calibration test data at the field location for a period of 2 years?	181(c)(3)(iii)	W
M-206	Whenever a gas meter is not functioning or not registering within the limits of accuracy prescribed by the manufacturer, is it removed from service and not returned to service until repaired or adjusted to read accurately?	181(c)(3)(iv)	C

### **SURFACE COMMINGLING OF PRODUCTION**

M-250	Does the lessee conduct a well test for allocation purposes at least once every 2 months?	182(c)	W
M-251	Does the lessee retain test data at the field location for a period of 2 years?	182(c)	W

### **SITE SECURITY**

M-300	Are the components of sales measuring devices (metering units and tanks) sealed in a manner to preclude tampering?	183(a)	W/C
M-301	Are wire or other acceptable types of seals numbered and recorded?	183(a)	W/C

M-302	Is a list of the seal numbers and the installation location maintained at the field location?	183(a)	W
M-303	Is a list of the seal numbers and the installation location available for inspection by MMS representatives?	183(a)	W
	<b>Are the following metering and sampling unit components sealed in such a manner that the component cannot be opened, closed, or altered in any way without destroying the seal:</b>		
M-304	All meter stack component connections from the base of the stack to the register?	183(a)(1)(i)	W/C
M-305	Sampling system including packing device, fittings, chains, sight glass, and container lid?	183(a)(1)(ii)	W/C
M-306	Components of the temperature and gravity compensation device?	183(a)(1)(iii)	W/C
M-307	Are all valves on lines leaving an oil storage tank including load-out line valves, drain-line valves, and connection-line valves between sale and nonsale tanks sealed in such a manner that the valve is closed and cannot be opened without destroying the seal?	183(a)(2)	C
M-308	Is each storage tank (sales or inventory) used in the royalty determination process clearly identified by a sign that contains the name of the facility operator, the size of the tank, and the tank number?	183(b)	W
M-309	Is there no bypass of MMS-approved royalty sales meters and sales tanks?	183(c)	W/C